

REMARKS

Applicant respectfully requests reconsideration of the above-identified application and entry of the after-final amendment pursuant to 37 C.F.R. § 1.116. Clarifying amendments have been made to Claims 3, 27, 31, and 34. Thus, Claims 1-25 and 27-41 are pending in the present application. Applicant acknowledges, with appreciation, that Claims 11-13 have been allowed, and that Claims 3, 8, 14, 15, 19-21, 25, 35, 36, and 38 contain allowable subject matter.

Claims 1, 2, 4-7, 9, 10, 16-18, 22-24, 27-34, 37, 40, and 41 were rejected in an Office Action dated May 12, 2005 (hereinafter "Office Action"), under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,538,893, issued to Tinsley (hereinafter "Tinsley"). Claim 39 has been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. As will be discussed in more detail below, applicant believes that the present application is in condition for allowance. Accordingly, applicant respectfully requests entry of the after-final amendment and the allowance of all pending claims.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claim 39 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office Action contends that the claim contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, the Office Action contends that in applicant's last amendment, applicant failed to point out where basis exists in the specification and drawings for the subject matter recited therein. In response to the rejection of Claim 39, applicant would like to direct the Examiner's attention to FIGURE 15 and page 11, lines 24-27, where it states that, "The projections 182 are cup-like or hollow in configuration and extend along the leading and trailing edges of the lobe for aiding in the retention of fuel within the combustion chamber

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during rotation." Accordingly, applicant respectfully requests withdrawal of the 35 U.S.C. § 112, first paragraph, rejection of Claim 39.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, 4-7, 9, 10, 16-18, 22-24, 27-34, 37, 40, and 41 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tinsley. Applicant respectfully traverses the rejection to these claims. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d. 1051, 1053 (Fed. Cir. 1987). For at least the following reasons, applicant respectfully asserts that the claimed combination of features recited in Claims 1, 2, 4-7, 9, 10, 16-18, 22-24, 27-34, 37, 40, and 41 are neither taught nor suggested by Tinsley.

Independent Claims 1, 27, 31, 34, 40, and 41 are generally directed to engines. Each claim recites a housing formed with either a pair of side-by-side intersecting cylindrical cavities (See Claim 1), a pair of side-by-side intersecting substantially cylindrical cavities (See Claim 27 and 34), parallel cylindrically shaped intersecting cavities (See Claim 31), or a pair of intersecting parallel cylinder walls having inner wall surfaces that define first and second interconnected cylindrical cavities (See Claims 40 and 41). Each claim further recites that the intersecting cylinder walls or cylindrical cavities form spaced-apart, parallel first and second edges, for example, the air plenum apex 42 and the exhaust plenum apex 44. See FIGURE 2.

Conversely, Tinsley teaches, on page 2, lines 42-45, that the working cavities of the engine are formed by an elongated inner casing 12 of a general elliptical cross-sectional shape. As can be clearly seen in FIGURE 1 of Tinsley, no spaced-apart, parallel edges are formed by the intersecting elliptical walls or intersecting elliptical cavities. Accordingly, applicant respectfully asserts that Tinsley fails to teach intersecting cylindrical wall or intersecting

cylindrical cavities that form spaced-apart, parallel first and second edges, as recited in the respective claims.

Further, applicant respectfully asserts there is no suggestion to utilize cylindrical cavities in the engine taught by Tinsley that intersect to form spaced-apart, parallel first and second edges for at least the following reason. The engine of Tinsley requires additional space within the working cavity just preceding and subsequent to combustion, as shown in FIGURE 1. This additional space allows the pistons 46 to reciprocate radially outward over an element 48 with respect to the rotational axis of the rotor 19 or 20. The piston 46 is required to reciprocate outwardly preceding combustion to maximize the volume of the secondary combustion chamber 38 prior to the compression stroke (compressing the air/fuel mixture in the secondary combustion chamber) caused by further rotor rotation. If cylindrical cavities were used by Tinsley that intersect to form spaced-apart, parallel first and second edges, the additional spaced needed for the pistons to slide outwardly would not exist, and thus, the engine of Tinsley would not be able to operate in the manner disclosed. Therefore, applicant asserts that one skilled in the art would not change the configuration of the cavities taught in Tinsley to form spaced-apart, parallel first and second edges as recited in the pending claims since it would directly affect the operation of the engine.

It is clear that Tinsley fails to teach or suggest the recited combination of elements of Claims 1, 27, 31, 34, 40, and 41. Therefore, applicant respectfully submit that the combinations of features recited in Claims 1, 27, 31, 34, 40, and 41 are allowable over the prior art. Thus, applicant respectfully requests the pending rejections of Claims 1, 27, 31, 34, 40, and 41 under 35 U.S.C. § 102(b) be withdrawn. Accordingly, applicant respectfully requests withdrawal of the pending rejections under 35 U.S.C. § 102(b) of Claims 2, 4-7, 9-10, 16-18, 22-24, 28-33, and 37 which depend from one of the allowable Claims 1, 27, 31, and 34.

CONCLUSION

In light of the foregoing amendments and remarks, applicant submits that the claims of the present application are in condition for allowance. Thus, applicant respectfully requests entry of the amendments pursuant to 37 C.F.R. § 1.116 and the allowance of all pending claims. If any further questions remain, the Examiner is invited to telephone applicant's attorney at the number listed below.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office, Group Art Unit 3748, Examiner Sheldon J. Richter, at facsimile number 571.273.8300 on August 10, 2005.

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